

SKM-Symposium Diffusionless Transformations in Magnetic and Ferroelectric Bulk and Thin Films (SKM-SYDT)

jointly organized by
 the Metal and Material Physics Division (MM),
 the Thin Films Division (DS),
 the Dielectric Solids Division (DF), and
 the Magnetism Division (MA)

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Diffusionless phase transformations are the decisive mechanism for multifunctional properties like the magnetic shape memory effect, ferroelectricity, magnetocaloric and multiferroic properties. These phase transformations can be controlled by external electric or magnetic fields as well as stress and pressure. Hence these complex materials exhibit multiple new physical effects, which are currently examined with dedicated theoretical and experimental methods.

By highlighting the close connections between the different classes of functional materials this symposium brings together different communities. As external constraints significantly affect these transformations, in particular thin films and nanostructures helped to understand the underlying coupling mechanism. Hence a particular focus will be on scale effects in functional materials exhibiting diffusionless transformations.

Overview of Invited Talks and Sessions

(lecture room TRE Ma)

Invited Talks

SKM-SYDT 1.1	Thu	10:30–11:00	TRE Ma	Domain boundaries as active elements in multiferroics and martensites: steps towards Domain Boundary Engineering — ●EKHARD K.H. SALJE
SKM-SYDT 1.2	Thu	11:00–11:30	TRE Ma	Intermediate Phases in Perovskite Solid Solutions — ●IAN REANEY, CLIVE RANDALL, DAVID WOODWARD
SKM-SYDT 1.3	Thu	11:30–12:00	TRE Ma	Adaptive martensite and giant strain effects in multiferroics — ●ULRICH K. RÖSSLER
SKM-SYDT 1.4	Thu	12:00–12:30	TRE Ma	Nature of magnetic coupling in Ni-Mn-based martensitic Heusler alloys — ●MEHMET ACET, SEDA AKSOY, EBERHARD F. WASSERMANN, LLUIS MANOSA, ANTONI PLANES
SKM-SYDT 1.5	Thu	12:30–13:00	TRE Ma	Orthorhombic to tetragonal transition of SrRuO₃ layers in Pr_{0.7}Ca_{0.3}MnO₃/SrRuO₃ superlattices — ●MICHAEL ZIESE, FRANCIS BERN, IONELA VREJOIU, ECKHARD PIPPEL, ELIZAVETA NIKULINA

Sessions

SKM-SYDT 1.1–1.5	Thu	10:30–13:00	TRE Ma	Diffusionless Transformations in Magnetic and Ferroelectric Bulk and Thin Films
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